

**4<sup>TH</sup> SEM./ CS & E/ E&TC / 2023(S)**  
**CST403/ ETT402 Microprocessor & Interfacing**

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2  
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
  - a. Write down the difference between microprocessor and microcontroller.
  - b. What are the different interrupts present in 8085 microprocessor?
  - c. What an instruction consists of?
  - d. Name the different methods of interfacing of I/O devices to 8085 based system.
  - e. Why data bus in microprocessor is bidirectional?
  - f. State the difference between STA and LDA instruction.
  - g. What do you mean by DMA techniques?
  - h. State the function of program counter and stack pointer.
  - i. What is the need for addressing?
  - j. Give examples of 1-byte, 2 byte and 3 byte instruction.
  
2. Answer **Any Six** Questions 6 x 5
  - a. With neat sketch explain the each bit position of flag register of 8085 microprocessor.
  - b. Write down the comparison between primary and secondary memory.
  - c. Draw the timing diagram of MVI 05 instruction of 8085 microprocessor.
  - d. Write an assembly language program for addition of two 8-bit nos.
  - e. Explain the principle operation of ADC 0801 interfacing with example.
  - f. Write down the difference between SPR and GPR.
  - g. Name the different addressing modes of 8085 and explain it with examples.
  
3. Describe the function of each block of 8085 architecture with neat diagram 10
4. With neat block diagram explain the function of each block of 8255. 10
5. Draw the functional block diagram of 8259 and explain the function of each block. 10
6. Write an interfacing program for the stepper motor control with a suitable diagram. 10
7. Design a time delay by using register pair. Find the maximum time delay using one register. 10